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Thomas M. Broderick

AZ CORP COMMISSION DOCKET CONTROL

Director

**Utilities Division** 

DATE:

January 22, 2016

RE:

STAFF REPORT FOR JOSHUA VALLEY UTILITY COMPANY, INC.'S

APPLICATION FOR AN INCREASE IN ITS RATES (DOCKET NO. W-

02023A-15-0315)

Attached is the Staff Report for Joshua Valley Utility Company, Inc.'s application for an increase in its rates. Staff recommends approval of the rate application using Staff's recommended rates and charges.

Any party who wishes may file comments to the Staff Report with the Commission's Docket Control by 4:00 p.m. on or before February 1, 2016.

TMB:BCA:red\ML

Originator: Brendan Aladi

Arizona Corporation Commission DOCKETED

JAN 2 2 2016

DOCKETED BY

Service List for: Joshua Valley Utility Company, Inc. Docket No. W-02023A-15-0315

Mr. John Ratliff Joshua Valley Utility Company PO Box 247 Meadview, Arizona 86444

Mr. Thomas M. Broderick Director, Utilities Division Arizona Corporation Commission 1200 West Washington Street Phoenix, Arizona 85007

Ms. Janice M. Alward Chief, Legal Division Arizona Corporation Commission 1200 West Washington Street Phoenix, Arizona 85007

Mr. Dwight Nodes Chief Administrative Law Judge, Hearing Division Arizona Corporation Commission 1200 West Washington Street Phoenix, Arizona 85007

# STAFF REPORT UTILITIES DIVISION ARIZONA CORPORATION COMMISSION

JOSHUA VALLEY UTILITY COMPANY, INC. DOCKET NO. W-02023A-15-0315

APPLICATION FOR A PERMANENT RATE INCREASE

**JANUARY 22, 2016** 

### STAFF ACKNOWLEDGMENT

The Staff Report for Joshua Valley Utility Company, Inc. ("Joshua Valley" or "Company") Docket No. W-02023A-15-0315, was the responsibility of the Staff members listed below. Brendan Aladi was responsible for the review and analysis of the Company's application for a permanent rate increase. Jeff Francis was responsible for the engineering and technical analysis. Carmen Madrid was responsible for reviewing the Arizona Corporation Commission's records on the Company and reviewing customer complaints filed with the Commission.

Brendan Aladi

Public Utilities Analyst

Jeff Francis

Utilities Engineer

Carmen Madrid

Consumer Analyst I

# JOSHUA VALLEY UTILITY COMPANY, INC. DOCKET NO. W-02023A-15-0315

On September 1, 2015, Joshua Valley Utility Company, Inc. ("Joshua Valley" or "Company") filed an application with the Arizona Corporation Commission ("Commission") for a permanent rate increase. On October 1, 2015, Joshua Valley met sufficiency requirements.

Joshua Valley is a class D for-profit Arizona public service corporation that provides potable water service to approximately 947 customers. The Company's service area is in the unincorporated community of Meadview, located approximately 70 miles North of Kingman, Arizona in Mohave County.

Joshua Valley proposed a \$95,000 or a 34.55 percent revenue increase from test year revenue of \$274,958 to \$369,958. The proposed revenue increase would produce an operating income of \$60,957 for a 7.10 percent rate of return on an original cost rate base ("OCRB") of \$859,068. The Company's proposed fair value rate base ("FVRB") is also \$859,068. The Company's proposed rates would increase the typical residential bill with a median usage of 945 gallons from \$30.93 to \$41.57, for an increase of \$10.65, or 34.43 percent.

Staff recommends an \$82,057 or 29.84 percent increase over the test year revenue of \$274,958 to \$357,015. Staff's recommended revenue would produce an operating income of \$59,050 for a 7.10 percent rate of return on a Staff adjusted OCRB of \$831,653. Staff's FVRB is also \$831,653. Staff's recommended rates would increase the typical residential 5/8 x 3/4-inch meter bill with a median usage of 945 gallons from \$30.93 to \$39.97, for an increase of \$9.04, or 29.24 percent as shown on Schedule BCA-5.

#### RECOMMENDATIONS

### Staff recommends:

- 1. The Commission approve the Staff-recommended rates and charges as shown on Schedule BCA-4.
- 2. The Company file with Docket Control, as a compliance item in this Docket, a schedule of its approved rates and charges within 30 days after the Decision in this matter is issued.
- 3. The Company utilize the depreciation rates as delineated in Table C of the attached Engineering Report on a going-forward basis.
- 4. The Company prepare a report containing a detailed analysis and plan to reduce the water loss to 10 percent or less. Lost water levels for Joshua Valley has been increasing for the past ten years and was calculated to be 17.42 percent in 2014 which exceeds acceptable limits. If the Company believes it is not cost effective to reduce the water loss to less than 10 percent, it should submit a detailed cost benefit analysis to support its opinion. In no case shall the company allow water loss to be

- greater than 15 percent. The water loss reduction report or the detailed analysis, whichever is submitted, shall be docketed as a compliance item within 90 days of the effective date of the order issued in this proceeding.
- 5. The Company install a meter on the 3-inch standpipe that will function year-round, regardless of freezing weather. This meter shall be installed and operational within 60 days of the effective date of the order issued in this proceeding.
- 6. That Joshua Valley file with Docket Control, as a compliance item in this docket and within 90 days of the effective date of a decision in this proceeding, at least three Best Management Practices ("BMP") in the form of tariffs that substantially conform to the templates created by Staff. The templates created by Staff are available on the Commission's website at <a href="http://www.azcc.gov/Divisions/Utilities/Water/forms.asp.">http://www.azcc.gov/Divisions/Utilities/Water/forms.asp.</a> Staff further recommends that a maximum of two BMPs may come from the "Public Awareness/Public Relations" or "Education and Training" categories. The Company may request cost recovery of the actual costs associated with the BMPs implemented in its next general rate application.

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### **FACT SHEET**

Current Rates: Decision No. 64000 dated August 30, 2001.

Type of Ownership: C-Corporation

**Location:** The Company's service area is in the unincorporated community of Meadview, located approximately 70 miles North of Kingman, Arizona in Mohave County.

Rate Application Docketed: September 1, 2015

Current Test year Ended: December 31, 2014

### Rates

Monthly Minimum Charges:	Current Rates	Company Proposed <u>Rates</u>	Staff Recommended <u>Rates</u>
$5/8 \times 3/4$ -inch meter	\$13.50	\$18.50	\$17.50
Gallons In Minimum	0	0	0
5/8 x <sup>3</sup> / <sub>4</sub> -inch Residential Customer Commodity Rate: Per 1,000 gallons: From 1 to 5,000 Gallons From 5,001 to 20,000 Gallons Over 20,000 Gallons From 1 to 3,000 Gallons From 3,001 to 10,000 Gallons Over 10,000 Gallons	\$3.40 \$3.90 \$4.25	\$4.00 \$5.25 \$6.54	\$4.00 \$5.20 \$6.43
Typical Residential Bill Analysis Present Proposed Recommended	\$30.93	\$41.57	\$39.97

Based on median usage of 945 gallons

### **Customers:**

Number of customers in prior rate case (12/31/99): 698 Average number of customers in the current test year (12/31/14): 947 Current Test Year customers by meter size:

5/8 X 3/4-inch	917
3/4-inch	4
1-inch	18
1-1/2-inch	1
2-Inch	1

Seasonal customers:

0

0

Customer notification: For rate application was filed on September 10, 2015.

Customer Complaints Concerning Rate Application:

Opinions – Rate Case Items - Opposed 4

#### SUMMARY OF RATE FILING

Joshua Valley Utility Company, Inc. ("Joshua Valley" or "Company") proposed a \$95,000 or a 34.55 percent revenue increase from test year revenue of \$274,958 to \$369,958. The proposed revenue increase would produce an operating income of \$60,957 for a 7.10 percent rate of return on an original cost rate base ("OCRB") of \$859,068. The Company's proposed fair value rate base ("FVRB") is also \$859,068. The Company's proposed rates would increase the typical residential bill with a median usage of 945 gallons from \$30.93 to \$41.57, for an increase of \$10.65, or 34.43 percent.

The test year results as adjusted by Utilities Division Staff ("Staff"), for Joshua Valley show total operating revenue of \$274,958, operating loss of \$3,811, for a rate of return that is not meaningful as shown on Schedule BCA-1, page 1 of 3.

Staff recommends an \$82,057 or 29.84 percent increase over the test year revenue of \$274,958 to \$357,015. Staff's recommended revenue would produce an operating income of \$59,050 for a 7.10 percent rate of return on a Staff adjusted OCRB of \$831,653. Staff's FVRB is also \$831,653. Staff's recommended rates would increase the typical residential 5/8 x 3/4-inch meter bill with a median usage of 945 gallons from \$30.93 to \$39.97, for an increase of \$9.04, or 29.24 percent as shown on Schedule BCA-5.

According to the application, the Company requests a rate increase due to increases in the cost of operations and decrease in usage. The infrastructure is aging and continues to need improvements to maintain the current level of service.

### **BACKGROUND**

On September 1, 2015, Joshua Valley filed an application with the Arizona Corporation Commission ("Commission") for a permanent rate increase. On October 1, 2015, Joshua Valley met sufficiency requirements.

Joshua Valley is a class D for-profit Arizona public service corporation that provides potable water service to approximately 947 customers. The Company's service area is in the unincorporated community of Meadview, located approximately 70 miles North of Kingman, Arizona in Mohave County. The Company's current rates and charges were authorized in Decision No. 64000, dated August 30, 2001.

#### **CONSUMER SERVICES**

Staff reviewed the Commission's records for the period beginning January 1, 2012, to November 23, 2015, and found no complaints and four opinions opposing the rate increase. A notarized affidavit of mailing for the Customer Notice was filed on September 10, 2015.

#### **COMPLIANCE**

A check of the Utilities Division Compliance Section Database indicates that there are currently no delinquencies for Joshua Valley as of October 5, 2015.

### **ENGINEERING ANALYSIS AND RECOMMENDATIONS**

An inspection of the Company's water system was conducted by Jeff Francis, Staff Engineer, accompanied by the Company's Certified Operator and Representative, Ron Raymond on March 5, 2015. A complete discussion of Staff's technical findings and recommendations and a complete description of the water system are provided in the attached Engineering Report.

### **RATE BASE**

The Company did not propose a fair value rate base that differs from its original cost rate base. Staff's adjustments decreased the Company's proposed rate base by \$27,415, from \$859,068 to \$831,653 as shown on Schedule BCA-2, page 1.

Plant-in-Service

Adjustment A decreases plant-in-service by \$37,653, from \$2,372,749 to \$2,335,096 as shown on Schedule BCA-2, pages 1 and 2. This reflects the removal of plant the Company failed to provide supporting invoices for.

Wells and Springs – Adjustment "a" decreases this account by \$10,201, from \$108,304 to \$98,103, as shown on Schedule BCA-2 pages 2 and 3. Staff decreased this account by \$10,103, to reflect the removal of the cost of wells and springs the Company failed to provide supporting invoices for.

<u>Transmission and Distribution Mains</u> – Adjustment "b" decreases this account by \$7,835, from \$1,992,877 to \$1,985,042, as shown on Schedule BCA-2 pages 2 and 3. Staff decreased this account by \$7,835, to reflect the removal of the cost of transmission and distribution mains the Company failed to provide supporting invoices for.

Meter and Meter Installations – Adjustment "c" decreases this account by \$14,106, from \$44,840 to \$30,734, as shown on Schedule BCA-2 pages 2 and 3. Staff decreased this account by \$14,106 to reflect the removal of the cost of meter and meter installations the Company failed to provide supporting invoices for.

<u>Computer Software</u> – Adjustment "d" decreases this account by \$1,497, from \$8,946 to \$7,449, as shown on Schedule BCA-2 pages 2 and 3. Staff decreased this account by \$1,497 to reflect the removal of the cost of computer software the Company failed to provide supporting invoices for.

Tools and Work Equipment – Adjustment "e" decreases this account by \$3,657, from \$3,657 to \$0, as shown on Schedule BCA-2 pages 2 and 3. Staff decreased this account by \$3,657 to reflect the removal of the cost of tools and work equipment the Company failed to provide supporting invoices for.

Miscellaneous Equipment – Adjustment "f" decreases this account by \$357, from \$357 to \$0, as shown on Schedule BCA-2 pages 2 and 3. Staff decreased this account by \$357 to reflect the removal of the cost of miscellaneous equipment the Company failed to provide supporting invoices for.

Accumulated Depreciation

Adjustment B decreases accumulated Depreciation by \$16,873, from \$1,481,455 to \$1,464,582, as shown on Schedule BCA-2, pages 1 and 4. This reflects the impact of Staff's recalculation of accumulated depreciation reserve based on Staff adjusted Plant-in-Service and Commission approved rates.

Amortization of Contribution in Aid of Construction ("CIAC")

Adjustment C decreased amortization of CIAC by \$5,426, from \$26,254 to \$20,828, as shown on Schedule BCA-2, page 1 of 5. Staff calculated amortization of CIAC by computing the amortization on the CIAC from the year the CIAC was received.

Working Capital

Staff's adjustments D decreases working capital by \$1,208, from \$24,052 to \$22,844, as shown on Schedule BCA-2, pages 1 and 6.

Cash working capital was calculated by using the formula method which equals one-eighth of the operating expenses less depreciation, taxes, purchased power and purchased water expenses plus one twenty-fourth of purchased power and purchased water expenses.

### **OPERATING INCOME STATEMENT**

Operating Revenue

Staff made no operating revenue adjustments.

Operating Expenses

Staff's adjustments to operating expenses resulted in a net decrease of \$5,756, from \$284,524 to \$278,768, as shown on Schedule BCA-3, page 1. Details of Staff's adjustments are presented below.

<u>Salaries and Wages Expense</u> – Adjustment A increases salaries and wages expense by \$12,600, from \$103,971 to \$116,571, as shown on Schedule BCA-3, pages 1 and 2. This reflects the reclassification of owner's salary of \$20,000 from Acct No. 630, outside services expense to Acct No. 601, Salaries and wages expense and the removal of \$7,400 due to duplication of service efforts (\$103,971+\$20,000-\$7,400 = \$116,571). Both the owner and the General Manager perform the same service "oversee all aspects of operations".

Outside Services Expense – Adjustment B decreases outside services expense by \$20,000, from \$21,718 to \$1,718, as shown on Schedule BCA-3, pages 1 and 2. This reflects the reclassification of \$20,000 in owner's salary expense from outside services expense, Acct. No. 630 to salaries and wages expense, Acct. No. 601.

Water Testing – Adjustment C increases water testing expense by \$370, from \$3,120 to \$3,490, as shown on Schedule BCA-3, pages 1 and 2 to reflect Staff Engineer's calculation of water testing expense.

<u>Depreciation Expense</u> – Adjustment D decreases depreciation expense by \$199 from \$50,066 to \$49,867, as shown on Schedule BCA-3, pages 1 and 2. Staff's depreciation expense reflects application of Staff's recommended depreciation rates to Staff's recommended plant balances.

<u>Income Tax Expense</u> – Adjustment E increases test year income tax expense by \$1,473, from negative \$2,406 to negative \$933, to reflect Staff's calculation of the income tax obligation on Staff's adjusted test year taxable income, as shown on Schedule BCA-3, page 1. Staff's calculation is shown on Schedule BCA-1 page 3.

### REVENUE REQUIREMENT

Staff recommends total annual operating revenue of \$357,015 as shown on Schedule BCA-3, page 1. Staff recommended revenue is an increase of \$82,057 or 29.84 percent over the test year revenue of \$274,958. Staff's recommended revenue would produce an operating income of \$59,050 for a 7.10 percent rate of return on the Staff recommended OCRB of \$831,653 as shown on Schedule BCA-1, page 1.

The Company requested a cash flow of \$111,023 as shown on Schedule BCA-1, page 2 of 3. Staff's total revenue requirement of \$357,015, provides the Company with a cash flow of \$108,917, also, shown on Schedule BCA-1, page 2 of 3. This is a sufficient cash flow to pay operating expenses and contingencies.

#### RATE DESIGN

Schedule BCA-4 presents a complete list of the Company's present, proposed, and Staff's recommended rates and charges.

The Company's current rate structure is comprised of three tiers, with a first-tier 1 to 5,000 -gallons; 5,001 to 20,000-gallons for the second-tier; and over 20,000-gallons for the third-tier. Its monthly minimum charges do not include any gallons. In this filing, the Company proposes to retain a three tiered rate structure, with a first-tier 1 to 3,000-gallons; 3,001 to 10,000-gallons for the second tier; and over 10,000-gallons for the third-tier.

The Company's proposed rates would increase the typical residential bill, for customers with a  $5/8 \times 3/4$  - inch meter and a median usage of 945 gallons, from \$30.93 to \$41.57 for an increase of \$10.65, or 34.43 percent as shown on Schedule BCA-5.

Staff's recommended rates would increase the typical residential  $5/8 \times 3/4$ -inch meter bill with a median usage of 945 gallons from \$30.93 to \$39.97, for an increase of \$9.04, or 29.24 percent as shown on Schedule BCA-5.

### MISCELLANEOUS SERVICE CHARGES

Reconnection (Delinquent) Charge – The Company proposes to decrease the reconnection (delinquent) service charge from \$50 to \$45. Staff recommends a charge of Reconnection (Delinquent) Charge of \$45.

Meter Test Charge – The Company proposes to increase meter test charge from \$25 to \$40. Staff recommends the Meter Test Charge of \$25 since the Commission provides meter testing at no charge.

NSF Check Charge – The Company proposes to increase the NSF check charge from \$20 to \$30. Staff recommends \$15, bank charges \$12 fee.

Meter Re-read – The Company proposes to increase the meter re-read charge from \$15 to \$25. Staff recommends a meter re-read charge of \$15.

After Hours Service Charge – Staff recommends adding a new \$50 after hours charge. An additional fee for service provided after normal business hours is appropriate when such service is at the customer's request or for the customer's convenience. Such a tariff compensates the utility for additional expenses incurred from providing after-hours service.

Moreover, it is appropriate to apply an after-hours service charge in addition to the charge for any utility service provided after hours at the customer's request or for the customer's convenience. For example, under Staff's proposal, a customer would be subject to a \$40 Establishment fee if it is done during normal business hours, but would pay an additional \$50 after-hours fee if the customer requested that the establishment be done after normal business hours.

<u>Moving Customer Meters</u> – The Company proposed a new Moving Meter at Customer Request Charge (R14-2-405.B) at Cost. Staff agrees with this charge.

### SERVICE LINE AND METER INSTALLATION CHARGES

The Company has requested changes to its service line and meter installation charges as shown on Schedule BCA-4.

Staff has recommended service line and meter installation charges based upon an analysis of costs as discussed in the attached Engineering Report. Further, since the Company may at times install meters on existing service lines, it would be appropriate for some customers to only be charged for the meter installation. Therefore, Staff recommends separate service line and meter installation charges. Staff recommends approval of Staff's service line and meter installation charges are shown on Schedule BCA-4.

### STAFF'S RECOMMENDATIONS

#### Staff recommends:

- 1. The Commission approve the Staff-recommended rates and charges as shown on Schedule BCA-4.
- 2. The Company file with Docket Control, as a compliance item in this Docket, a schedule of its approved rates and charges within 30 days after the Decision in this matter is issued.
- 3. The Company utilize the depreciation rates as delineated in Table C of the attached Engineering Report on a going-forward basis.
- 4. The Company prepare a report containing a detailed analysis and plan to reduce the water loss to 10 percent or less. Lost water levels for Joshua Valley has been increasing for the past ten years and was calculated to be 17.42 percent in 2014 which exceeds acceptable limits. If the Company believes it is not cost effective to reduce the water loss to less than 10 percent, it should submit a detailed cost benefit analysis to support its opinion. In no case shall the company allow water loss to be greater than 15 percent. The water loss reduction report or the detailed analysis, whichever is submitted, shall be docketed as a compliance item within 90 days of the effective date of the order issued in this proceeding.
- 5. The Company install a meter on the 3-inch standpipe that will function year-round, regardless of freezing weather. This meter shall be installed and operational within 60 days of the effective date of the order issued in this proceeding.
- 6. That Joshua Valley file with Docket Control, as a compliance item in this docket and within 90 days of the effective date of a decision in this proceeding, at least three Best Management Practices ("BMP") in the form of tariffs that substantially conform to the templates created by Staff. The templates created by Staff are available on the Commission's website at <a href="http://www.azcc.gov/Divisions/Utilities/Water/forms.asp">http://www.azcc.gov/Divisions/Utilities/Water/forms.asp</a>.

Staff further recommends that a maximum of two BMPs may come from the "Public Awareness/Public Relations" or "Education and Training" categories. The Company may request cost recovery of the actual costs associated with the BMPs implemented in its next general rate application.

### JOSHUA VLLEY UTILITY COMPANY

Docket No. W-02023A-15-0315 Test Year Ended :12/31/14

### SUMMARY OF FILING

Г		Present	Rate	es		Proposed		Staff		
		Company		Staff		Company		Recommended		
		as		as		as		as		
		Filed		Adjusted		Filed		Adjusted		
•										
1 Revenues:		054 457	ው	071 457	\$	366,457	\$	353,514		
2 Metered Water Revenue	\$	271,457	\$	271,457	Ф	500,457	#	-		
3 Unmetered Water Revenue		2 501		3,501		3,501		3,501		
4 Other Water Revenues		3,501		3,301		3,301		,		
5	<u></u>	274,958	\$	274,958	\$	369,958	\$	357,015		
6 Total Operating Revenue	_\$	2/4,936	Ψ	217,730	<del>"</del>	,				
7										
8 Operating Expenses:	œ.	214,635	\$	207,605	\$	214,635	\$	207,605		
9 Operation and Maintenance	\$	50,066	₩	49,867	*	50,066		49,867		
10 Depreciation		19,587		19,587		23,244		20,640		
11 Property & Other Taxes		(2,406)		(933)		18,414		17,211		
12 Income Tax	\$	2,642	\$	2,642	\$	2,642	\$	2,642		
13 Bad Debt Expense	\$	284,524	<del>*</del>	278,769	<del>-</del>	309,001	\$	297,965		
14 Total Operating Expense		201,321								
15	\$	(9,566)	\$	(3,811)	\$	60,957	\$	59,050		
16 Operating Income/(Loss)			=		=					
17										
18	\$	859,068	\$	831,653	\$	859,068	\$	831,653		
19 Rate Base O.C.L.D.	Ψ	037,000	7	,						
20 21 D = 5D + 22 O G I D		N/M		N/M		7.10%		7.10%		
21 Rate of Return - O.C.L.D		- 7 -								
22		N/M		N/M		16.48%		16.54%		
23 Operating Margin		•								
24 25 Cash Flow - Before Debt Service(L10+L16)	\$	40,500	\$	46,057	\$	111,023	\$	108,917		
72 Casii Lion - Deloie Dept pervise(Pro , Tra)	-	•								

NOTE: Operating Margin represents the proportion of funds available to pay interest and other below the line or non-ratemaking expenses.

### JOSHUA VLLEY UTILITY COMPANY

Docket No. W-02023A-15-0315

Test Year Ended:12/31/14

### REVENUE REQUIREMENT CALCULATION

		T	[A] COMPANY				[B] STAFF	
LINE NO.	DESCRIPTION		ORIGINAL COST				ORIGINAL COST	
1	Adjusted Rate Base		\$	859,068		\$	831,653	
2	Adjusted Operating Income (Loss)		\$	(9,566)		\$	(3,810)	
3	Current Rate of Return (L2 / L1)	1	Not M	leaningful		Not Meaningful		
4	Required Rate of Return (L5 / L1)			7.10%			7.10%	
5	Required Operating Income (L4 * L1)		\$	60,957		\$	59,050	
6	Operating Income Deficiency (L5 - L2)		\$	70,523		\$	62,860	
7	Gross Revenue Conversion Factor			0.0000			1.3054	
8	Required Revenue Increase (L7 * L6)		\$	95,000		\$	82,057	
9	Adjusted Test Year Revenue		\$	274,958		\$	274,958	
10	Proposed Annual Revenue (L8 + L9)		\$	369,958		\$	357,015	
11	Required Increase in Revenue (%)			34.55%			29.84%	
12	Proposed Operating Margin			16.48%			16.54%	
13	Depreciation Expense		\$	50,066		\$	49,867	
14	Cash Flow (L5 + L13)		\$	111,023		\$	108,917	

References:

Column (A): Company Application Column (B): Staff Schedules

### GROSS REVENUE CONVERSION FACTOR AND INCOME TAX CALCULATION FOR RECOMMENDED REVENUE

		Γ		T	Ţ	Γ	Γ		$^{-}$ $^{-}$		1
LINE NO.	DESCRIPTION	L	[A]		[B]	J	[C]			[D]	ال
11.0.											
1	<u>Calculation of Gross Revenue Conversion Factor:</u> Revenue		100.0000								
2	Uncollectible Factor (Line 11)		0.0000								
3	Devenues (L1 L2)		23.3948								
4	Combined Federal and State Tax Rate (Line 17) + Property Tax Factor (Line 22)		76.6052								
5	Subtotal (L3 - L4) Revenue Conversion Factor (L1 / L5)		1.30539								
6	Revenue Conversion Factor (E17 E5)										
	Calculation of Uncollectible Factor:		100.0000	%							
7	Unity Date (Line 17)		22,3991								
8	Combined Federal and State Tax Rate (Line 17) One Minus Combined Income Tax Rate (L7 - L8)		77.6009								
9 10	Uncollectible Rate		0.0								
11	Uncollectible Factor (L9 * L10 )			0							
	To Deter										
40	<u>Calculation of Effective Tax Rate:</u> Operating Income Before Taxes (Arizona Taxable Income)		100.0000	%							
12 13	Arizona State Income Tax Rate		5.5000								
14	Federal Taxable Income (L12 - L13)		94.5000								
15	Applicable Federal Income Tax Rate (Line 44)		17.8827 16.8991								
16	Effective Federal Income Tax Rate (L14 x L15)		22.3991								
17	Combined Federal and State Income Tax Rate (L13 +L16)			<del></del>							
	Calculation of Effective Property Tax Factor		400.000	107							
18	Unity		100.0000 22.3991								
19	Combined Federal and State Tax Rate (Line 17)		77.6009								
20	One Minus Combined Income Tax Rate (L18 - L19) Property Tax Factor (XXX-18, L24)		1.2830								
21 22	Effective Property Tay Factor (L 21 * L 22)		0.995	5%	00.0040	•					
23	Combined Federal and State Tax and Property Tax Rate (L17+L22)				23.3948	<u>%</u>					
0.4	Required Operating Income		\$ 59,0	50							
24 25	Adjusted Test Year Operating Income (Loss)		\$ (3,8	10)		•					
26	Required Increase in Operating Income (L24 - L25)				\$ 62,86	U					
			\$ 17,2	11							
27	Income Taxes on Recommended Revenue (Col. (D), L52) Income Taxes on Test Year Revenue (Col. (B), L52)			33)							
28 29	Required Increase in Revenue to Provide for Income Taxes (L27 - L28)				\$ 18,14	4					
25	·		\$ 357,0	15							
30	Recommended Revenue Requirement (Schedule BCA-1, Line 10)			0%							
31	Uncollectible Rate (Line 10) Uncollectible Expense on Recommended Revenue (L24 * L25)		\$	-							
32 33	Adjusted Test Veer Uncollectible Expense		\$	-							
34	Required Increase in Revenue to Provide for Uncollectible Exp. (L32 - L33)				\$	<del>-</del> -					
			\$ 11,6	36							
35	Property Tax with Recommended Revenue (BCA-3, L19) Property Tax on Test Year Revenue (BCA-3, L 20)		\$ 10,5					400			
36 37	Increase in Property Tax Due to Increase in Revenue (BCA-3, L21)				\$ 1,05	3_	\$	(0)			
31					\$ 82,05	57					
38	Total Required Increase in Revenue (L26 + L30 + L34+L37)				\$ 02,00						
							STA				
	Calculation of Income Tax:		Test Yea				Recomi				
39	Revenue		\$274,9		\$ 82,05 \$ 1,05			357,015 280,754			
40	Operating Expenses Excluding Income Taxes		279,7	/U1	\$ 1,0	55	Ψ 2	-			
41	Synchronized Interest (L47)		\$ (4,7	743)			\$	76,261			
42	Arizona Taxable Income (L36 - L37- L38)		5.500					5.5000%		• 44	O.4
43 44	Arizona State Income Tax Rate Arizona Income Tax (L39 x L40)				\$ (2	61)	œ	72,067		\$ 4,1	54
45	Federal Tayable Income (L33 - L35)			482) 872)			\$ \$	7,500			
46	Foderal Tay on First Income Bracket (\$1 - \$50,000) @ 15%		\$ (I	672) -			\$	5,517			
47	Federal Tax on Second Income Bracket (\$50,001 - \$75,000) @ 25% Federal Tax on Third Income Bracket (\$75,001 - \$100,000) @ 34%		\$ \$	-			\$	•			
48	Enderal Tay on Fourth Income Bracket (\$100,001 - \$335,000) @ 39%		\$	-			\$	-			
49 50	Federal Tax on Fifth Income Bracket (\$335,001 -\$10,000,000) @ 34%		\$	-	e	721	\$	-		\$ 13,0	17
51	Total Federal Income Tax					<u>72)</u> 33)				\$ 17,2	
52	Combined Federal and State Income Tax (L35 + L42)					<u>/.</u>					
	Applicable Federal Income Tax Rate [Col. (D), L42 - Col. (B), L42] / [Col. (C),	L36 - Col. (	A), L36]							17.8	8%
53	Applicable repelal income Tax Nate (ooi: (b), 272 300 (5), 272 (500 (5))	`	•								
	Calculation of Interest Synchronization:		\$ 831,	653							
54	Rate Base (Schedule BCA-2)			00%							
55 56	Weighted Average Cost of Debt Synchronized Interest (L45 X L46)		\$								
20	Synchronized interest (4-10 / 2-10)										

### JOSHUA VLLEY UTILITY COMPANY

Docket No. W-02023A-15-0315 Test Year Ended :12/31/14

### ORIGINAL COST RATE BASE/FAIR VALUE

 Original Co	st					
 Company	Adjustment		Staff			
\$ 2,372,749 \$	(37,653) A	\$	2,335,096			
 1,481,455	(16,873) E	3	1,464,582			
\$ 891,294 \$	(20,781)	\$	870,513			
 25,226	-		25,226			
 25,226			25,226			
58,342	-		58,342			
 26,254	(5,426)	(5,426) C				
 32,088	5,426		37,514			
-			-			
-	-		-			
\$ 57,314 \$	5,426	\$	62,740			
1,036	(0)		1,036			
24,052	(1,208)	D	22,844			
-	-		-			
 -	_		-			
\$ 25,088 \$	(1,209)	\$	23,879			
\$ 859,068 \$	(27,415)	\$	831,653			
\$ \$	Company \$ 2,372,749 \$  1,481,455 \$ 891,294 \$  25,226  25,226  58,342  26,254  32,088  -  \$ 57,314 \$  1,036  24,052  \$ 25,088 \$	\$ 2,372,749 \$ (37,653) A  1,481,455 (16,873) E  \$ 891,294 \$ (20,781)  25,226	Company       Adjustment         \$ 2,372,749 \$ (37,653) A \$         1,481,455 (16,873) B         \$ 891,294 \$ (20,781) \$         25,226			

Explanation of Adjustment:

- A Refer to Schedule BCA-2, Pages 2 and 3
- B Refer to Schedule BCA-2, Page 4
- C Refer to Schedule BCA-2, Pages 5 and 6
- D Refer to Schedule BCA-2, Page 6

## JOSHUA VLLEY UTILITY COMPANY Docket No. W-02023A-15-0315

Test Year Ended:12/31/14

### PLANT ADJUSTMENT

		Company Exhibit	Adjustment			Staff Adjusted
301	Organization Costs	\$ _	\$ -		\$	-
302	Franchise Costs	-	-			-
303	Land & Land Rights	6,176	-			6,176
304	Structures & Improvements	2,745	-			2,745
307	Wells & Springs	108,304	(10,201)	a		98,103
311	Electric Pumping Equipment	72,920	(0)			72,920
320	Water Treatment Equipment	-	-			-
320.1	Water Treatment Plants	-	-			-
320.2	Solutions & Feeders	-	-			-
320.3	Media for Arsenic Treatment	-	-			-
330	Distribution Reservoirs & Standpipes	-	-			-
330.1	Storage Tank	40,080	-			40,080
330.2	Pressure Tanks	-	-			-
331	Transmission & Distribution Mains	1,992,877	(7,835)	Ь		1,985,042
333	Services	18,456	-			18,456
334	Meters & Meter Installations	44,840	(14,106)	c		30,734
335	Hydrants	-	-			-
336	Backflow Prevention Devices	-	-			-
339	Other Plant & Misc. Equip.	-	-			-
340	Office Furniture & Fixtures	11,367	-			11,367
340.1	Computer & Software	8,946	(1,497)	d		7,449
341	Transportation Equipment	56,693	-			56,693
342	Store Equipment	-	-			-
343	Tools & Work Equipment	3,657	(3,657)	e		-
344	Laboratory Equipment	-	-			-
345	Power Operated Equipment	5,331	-			5,331
345	Communications Equipment	-	-			-
347	Miscellaneous Equipment	357	(357)	f		-
348	1 1	-	-			-
105	9	 <u>-</u>	 <u>-</u>			-
	TOTALS	\$ 2,372,749	\$ (37,653)	Α	\$_	2,335,096

Docket No. W-02023A-15-0315 Test Year Ended :12/31/14

### STAFF RATE BASE ADJUSTMENTS

a -	WELLS AND SPRINGS - Per Company Per Staff	<del>\$</del>	108,304 98,103	\$ (10,201)
	To remove the cost of plant the Company failed to provide supporting invoices.			
b -	TRANSMISSION & DISTRIBUTION MAINS - Per Company Per Staff		,992,877 ,985,042	\$ (7,835)
	To remove the cost of plant the Company failed to provide supporting invoices.			
c -	METERS AND METER INSTALLATIONS - Per Company Per Staff		44,840 30,734	\$ (14,106)
	To remove the cost of plant the Company failed to provide supporting invoices.			
d -	COMPUTER AND SOFTWARE - Per Company Per Staff	\$	8,946 7,449	\$ (1,497)
	To remove the cost of plant the Company failed to provide supporting invoices.			
e -	TOOLS & WORK EQUIPMENT - Per Company Per Staff	<b>\$</b>	3,657 	\$ (3,657)
	To remove the cost of plant the Company failed to provide supporting invoices.			
f -	MISCELLANEOUS EQUIPMENT - Per Company Per Staff	<b>\$</b>	357	\$ (357)
	To remove the cost of plant the Company failed to provide supporting invoices.			

### JOSHUA VLLEY UTILITY COMPANY

Docket No. W-02023A-15-0315 Test Year Ended :12/31/14

### ACCUMULATED DEPRECIATION ADJUSTMENT

	Amount
Accumulated Depreciation - Per Company Accumulated Depreciation - Per Staff	\$ 1,481,455 1,464,582 B
Total Adjustment	\$ (16,873)

### Explanation of Adjustment:

B - To reflect Staff's calculation of accumulated depreciation reserve based on Staff's adjustments to plant.

ACCT		ACCUMULATED DEPRECIATION					
ACCI		Company		Staff	Staff		
No.	Description	<u>Application</u>	4	<u>Adjustment</u>	<u>Calculated</u>		
	Intangibles	\$	\$	- \$	-		
	Land and Land Rights	-		-	-		
	Structures and Improvements	2,227		-	2,227		
	Wells and Srings	30,080		(4,401)	25,679		
	Power Generation Equipment	-		-	-		
	Electrical Pumping Equipment	43,899		0	43,899		
320.1	Water Treatment Plant	-		-	-		
320.2	Solution Chemical Feeders			-	-		
320.3	Media for Arsenic Treatment			-	-		
330	Distribution Reservoirs & Standpipes	-		-	-		
330.1	Storage Tank	26,294		-	26,294		
330.2	Pressure Tank	-		-	-		
331	Transmission and Distribution Mains	1,241,295		(1,175)	1,240,120		
333	Services	14,976		-	14,976		
334	Meters and Meter Installation	39,547		(8,813)	30,734		
335	Hydrants	-		-	-		
339	Other Plant and Miscellaneous Equipment	-		_	-		
340	Office Furniture and Fixtures	11,367		-	11,367		
340.1	Computers and Software	8,107	,	(845)	7,262		
341	Transportation Equipment	56,693	•	=	56,693		
343	Tools and Work Equipment	1,371		(1,371)	-		
345		5,331		-	5,331		
346		-		-	-		
347		268	3	(268)	-		
348	Other Tangible Plant			-	- 4 464 500		
	Total	\$ 1,481,455		(16,873)	\$ 1,464,582		

Test Year Ended: 12/31/14

### CIAC Amortization Adjustment

Amortization Rate

2.34%

	CLAC	CIAC			Amorti	izatio	zation		
	Adds	(	Cumulative		Annual	C	lumulative		
Balance per Decision									
64000		\$	58,342.00			\$	1,750.00		
2001	-		58,342.00		1,362.72		3,112.72		
2002	-		58,342.00		1,362.72		4,475.44		
2003			58,342.00		1,362.72		5,838.16		
2004	-		58,342.00		1,362.72		7,200.87		
2005	-		58,342.00		1,362.72		8,563.59		
2006	_		58,342.00		1,362.72		9,926.31		
2007	-		58,342.00		1,362.72		11,289.03		
2008	<u>-</u>		58,342.00		1,362.72		12,651.75		
2009	-		58,342.00		1,362.72		14,014.47		
2010	_		58,342.00		1,362.72		15,377.18		
2011	-		58,342.00		1,362.72		16,739.90		
2012	_		58,342.00		1,362.72		18,102.62		
2013	-		58,342.00		1,362.72		19,465.34		
2014	_		58,342.00		1,362.72		20,828.06		
	Test Year end 12/31/2014	\$	58,342.00				20,828.06		
			o amortization	\$	19,078.06				
1	Net CIAC 12/31/14					\$	37,513.94		

### STAFF RATE BASE ADJUSTMENTS

	ADVANCE IN AID OF CONSTRUCTION (AIAC) - Per Company Per Staff	25,226 25,226 \$
	To reflect Staff's calculation of net ALAC balance based on the Company's application.  12/31/2000 Ending Balance (Decision No. 64000) \$ 32,302  AIAC Additions since the last rate case \$ 103,370  Less: AIAC Refunds since the last Rate case \$ 110,446  Net AIAC Balance \$ 25,226	
C -	AMORTIZATION OF CIAC - Per Company Per Staff	26,254 20,828 <b>\$</b> (5,426)
	To reflect Staff's calculation of Amortization of CIAC based on the Company's application.	
-	WORKING CAPITAL (1/24 Purchased Pwr & Wtr) Per Company Per Staff	\$ 1,036 1,036 \( \\$ (0)
	To reflect Staff's calculation of cash working capital based on Staff's recommendations for purchased power and purchased water.	
D -	WORKING CAPITAL (1/8 operation & Maint exp.) Per Company Per Staff	\$ 24,052 22,844 <u>\$ (1,208)</u>
	To reflect Staff's calculation of cash working capital based on Staff's	

recommendations for operation and maintenance expenses. (excluding purchased power and purchased water expenses).

Docket No. W-02023A-15-0315 Test Year Ended :12/31/14

#### STATEMENT OF OPERATING INCOME

STATEMENT OF OPP	NAT IINC	TINCOM.	E.					Staff			
		Company		Staff		Staff Proposed			Staff		
		Exhibit		Adjustments		Adjusted		Change	Rec	ommended	
Revenues:				· · · · · · · · · · · · · · · · · · ·		 		- O			
461 Metered Water Revenue	\$	271,457	\$	_		\$ 271,457	\$	82,057	\$	353,514	
460 Unmetered Water Revenue		_		-		´ -		,	\$	, -	
474 Other Water Revenues		3,501				 3,501			\$	3,501	
Total Operating Revenue	\$	274,958	\$	-		\$ 274,958	\$	82,057	\$ \$	357,015	
Operating Expenses:									\$	-	
601 Salaries and Wages		103,971		12,600	Α	116,571		-	\$	116,571	
610 Purchased Water		-		-		-		-	\$	_	
615 Purchased Power		24,854		-		24,854		-	\$	24,854	
618 Chemicals		-		-		-		-	\$	-	
620 Repairs and Maintenance		8,240		-		8,240		-	\$	8,240	
621 Office Supplies & Expense		10,975		-		10,975		-	\$	10,975	
630 Outside Services		21,718		(20,000)	В	1,718		-	\$	1,718	
635 Water Testing		3,120		370	С	3,490		-	\$	3,490	
641 Rents		4,800		-		4,800		-	\$	4,800	
650 Transportation Expenses		14,945		-		14,945		_	\$	14,945	
657 Insurance - General Liability		6,953		-		6,953		-	\$	6,953	
659 Insurance - Health and Life		-		_		_		-	\$	_	
666 Regulatory Commission Expense - Rate Case		7,500		-		7,500		_	\$	7,500	
675 Miscellaneous Expense		7,559		-		7,559		_	\$	7,559	
403 Depreciation Expense		50,066		(199)	D	49,867		-	\$	49,867	
408 Taxes Other Than Income		9,004				9,004		_	\$	9,004	
408.11 Property Taxes		10,583		0		10,583		1,053	\$	11,636	
409 Income Tax		(2,406)		1,473	E	(933)		18,144	\$	17,211	
676 Bad Debt Expense		2,642				2,642		-	\$	2,642	
Total Operating Expenses	\$	284,524	\$	(5,756)		\$ 278,768	\$	19,197	\$	297,965	
OPERATING INCOME/(LOSS)	\$	(9,566)	\$	5,756		\$ (3,810)	\$	62,860	\$	59,050	

### Joshua Valley Utility Company Docket No. W-02023A-15-0315

Test Year Ended:12/31/14

### OPERATING EXPENSE ADJUSTMENTS (Cont.)

A -	SALARIES AND WAGES EXPENSE - Per Company Per Staff	\$ 	103,971 116,571	\$ 12,600
	\$20,000 - Owners Salary reclassified from outside services <u>\$7,400 - Removed due to duplication of service efforts</u> \$12,600			
В -	OUTSIDE SERVICES - Per Company Per Staff	\$ 	21,718 1,718	\$ (20,000)
	To reclassify \$20,000 in salary for the owner from outside services expense to salaries and wages expense.			
C -	WATER TESTING - Per Company Per Staff	\$	3,120 3,490	\$ 370
	To reflect Staff's annual water testing expense, per Staff's Engineering Report.			
D -	DEPRECIATION - Per Company Per Staff	\$	50,066 49,867	\$ (199)
	See Schedule BCA-3, Page 4 for Calculation.			
E -	INCOME TAX - Per Company Per Staff	<b>\$</b>	(2,406) (933)	\$ 1,473

To reflect Staff's calculation of the income tax obligation on Staff's adjusted test year taxable income.

### JOSHUA VLLEY UTILITY COMPANY

Docket No. W-02023A-15-0315 Test Year Ended :12/31/14

#### PRO FORMA ANNUAL DEPRECIATION EXPENSE

LINE NO.	ACCT NO.	DESCRIPTION	UTILITY PLANT IN SERVICE BALANCES	•	N-DEPRECIABLE BALANCES		CIABLE PLANT SERVICE	IDEPREC. RATE		CIATIOI ENSE
<u>NO.</u>	Plant In Se		SERVICE DALANCES	TLANI	DALANCES	114.	SERVICE	MIL	LAI	LINOL
1	301	Organization Costs	<b>\$</b> -	\$	_	\$	_	0.00%	\$	_
2	302	Franchise Costs	-	•	_	Ψ	_	0.00%	*	_
3	303	Land & Land Rights	6,176		6,176		_	0.00%		
4	304	Structures & Improvements	2,745		0,170		2,745	3.33%		91
5	307	Wells & Springs	98,103		_		98,103	3.33%		3,267
6	311	Electric Pumping Equipment	72,920		31,510		41,410	12.50%		5,176
7	320	Water Treatment Equipment	72,20			STEEDS S				
8	320.1	Water Treatment Plants		GM JESTA 1 CH 1200 88608 01 6	12.0 mark (18.0 kg/s/2004)	then in this in the	AF VS.A. E. E. L. (1980) SAFELE SAFE	3.33%	andiometri.	.nis
9	320.2	Solutions & Feeders	-		_		_	20.00%		_
10	320.3	Media for Arsenic Treatment	_		_			33.30%		_
11	330	Distribution Reservoirs & Standpipes	_ ®						574 TY26	-
12	330.1	Storage Tank	40,080	NANCO (2 NA CENTRA DE CONTRA D	hari Sania Budhabili da da da sa	C200002000 v 672006988	40,080	2.22%	Sec. 10 20 20 20 20 20 20 20 20 20 20 20 20 20	890
13	330.2	Pressure Tanks	-				,	5.00%		
14	331	Transmission & Distribution Mains	1,985,042		_		1,985,042	2.00%		39,701
15	333	Services	18,456				18,456	3.33%		615
16	334	Meters & Meter Installations	30,734		30,734		-	8.33%		-
17	335	Hydrants			-		-	2.00%		-
18	336	Backflow Prevention Devices	-		-		-	6.67%		-
19	339	Other Plant & Misc. Equip.	_		-		-	6.67%		-
20	340	Office Furniture & Fixtures	11,367		11,367		-	6.67%		-
21	340.1	Computer & Software	7,449		· -		7,449	20.00%		1,490
22	341	Transportation Equipment	56,693		56,693		· -	20.00%		
23	342	Store Equipment	•		-		-	4.00%		-
24	343	Tools & Work Equipment			-		-	5.00%		-
25	344	Laboratory Equipment	-		-		-	10.00%		-
26	345	Power Operated Equipment	5,331		5,331		-	5.00%		-
27	345	Communications Equipment	-		-		-	10.00%		-
28	347	Miscellaneous Equipment	-		-		-	10.00%		-
29	348	Other Tangibles	-		-		-	10.00%		-
30		Subtotal General	\$ 2,335,096	\$	141,811	\$	2,193,285		\$	51,229
31		Composite Depre. Rate (O40/K40)	2.34%							
		CIAC	58,342							
		Amortization of CIAC	1,363							
31		Depreciation Expense Before Amort. Of CIAC	\$ 51,229							
32		Less: Amortization of CIAC	1,363							
		Test Year Depreciation Expense - Staff	\$ 49,867							
		Depreciation Expense - Company	50,066							
		Staff's Total Adjustment:	\$ (199)							

Docket No. W-02023A-15-0315 Test Year Ended :12/31/14

### OPERATING INCOME ADJUSTMENT F - PROPERTY TAXES

			[A]		[B]
LINE			STAFF		STAFF
NO.	DESCRIPTION	AS	ADJUSTED	REG	COMMENDE
1	Staff Adjusted Test Year Revenues	\$	274,958	\$	274,958
2	Weight Factor		2		2
3	Subtotal (Line 1 * Line 2)	\$	549,916	\$	549,916
4	Staff Recommended Revenue	\$	274,958	_ \$	357,015
5	Subtotal (Line 4 + Line 5)	\$	824,874	- \$	906,931
6	Number of Years		3		. 3
7	Three Year Average (Line 5 / Line 6)	\$	274,958	\$	302,310
8	Department of Revenue Multiplier		2		2
9	Revenue Base Value (Line 7 * Line 8)	\$	549,916		604,621
10	Plus: 10% of CWIP		-		-
11	Less: Net Book Value of Licensed Vehicles				
12	Full Cash Value (Line 9 + Line 10 - Line 11)	\$	549,916	9	604,621
13	Assessment Ratio		18.50%		18.50%
14	Assessment Value (Line 12 * Line 13)	\$	101,734	\$	111,855
15	Composite Property Tax Rate - Obtained from ADOR		10.40290%		10.40290%
16	Staff Test Year Adjusted Property Tax Expense (Line 14 * Line 15)	\$	10,583		
17	Company Proposed Property Tax		10,583		
18	Staff Test Year Adjustment (Line 16 - Line 17)	\$	0		
19	Property Tax - Staff Recommended Revenue (Line 14 * Line 15)	<u> </u>		<b>\$</b>	11,636
20	Staff Test Year Adjusted Property Tax Expense (Line 16)				10,583
21	Increase in Property Tax Due to Increase in Revenue Requirement			\$	1,053
22	Increase in Property Tax Due to Increase in Revenue Requirement (Line 21)			\$	1,053
23	Increase in Revenue Requirement			\$	82,057
24	Increase in Property Tax Per Dollar Increase in Revenue (Line 22 / Line 23)				1.283024%

### **REFERENCES:**

Line 15: Composite Tax Rate obtained from Arizona Department of Revenue

Line 17: Company Application

Line 21: Line 19 - Line 20

Line 23: Schedule BCA-1, Page 2

Joshua Valley Utility Company, Inc. Docket No. W-02023A-15-0315 Test Year Ended: December 31, 2014

\$ 18.50 27.75 46.25 92.50 148.00 296.00 462.50 \$ 925.00 	\$ 17.50 25.50 42.50 85.00 180.00 200.00 300.00 \$ 600.00
\$ 4.00 5.25	25.50 42.50 85.00 180.00 200.00 300.00
\$ 4.00 \$ 4.00 \$ 5.25	42.50 85.00 180.00 200.00 300.00
\$ 4.00 5.25	85.00 180.00 200.00 300.00
\$ 4.00 5.25	180.00 200.00 300.00
\$ 4.00 5.25	300.00
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Service Line and Meter Installation Charges		1			
Establishment	\$ 35.00	\$	35.00	\$	35.00
Reconnection (Delinquent)	\$ 50.00	\$	45.00	\$	45.00
After Hours Service Charge	N/A	\$	50.00	\$	50.00
Meter Test (If Correct)	\$ 25.00	\$	40.00	\$	25.00
Deposit	*	_	*		*
Deposit Interest	*	·	*		*
Re-establishment (within 12 months)	**		**		**
NSF Check	\$ 20.00	s	30.00	s.	15.00
Deferred Payment (per month)	1.50%	· ·	1.50%	•	1.50%
Meter Re-read (if correct)	\$ 15.00	l s	25.00	\$	15.00
Late Fee (Per Month)	1.50%	· ·	1.50%	•	1.50%
Moving Customer Meter at Customer Request					1.0070
Per rule R14-2-405B	N/A		Cost		Cost
Fire Sprinkler (All Meter Sizes)	***		***		***

\* Per Commission Rules R14-2-403(B)
\*\* Months of system times the minimium. Per Commission Rule R14-2-403(D)
\*\*\* 2 percent of the monthly minimum for a comparable size meter connection but not less than \$10 per month.

Service Line and Meter Installation Charges

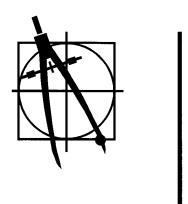
			Co	Company Proposed					Staff Recommended				
	Cor	npany	Service					Service					
	Cı	irrent	Line	•	Meter		Total	Line		Meter		Total	
	R	ates	Charge	C	Charge	C	Charge	Charge		Charge	(	Charge	
5/8" x 3/4" Meter	\$	320	. 490	\$	132	\$	622	490	\$	132	\$	622	
3/4" Meter	\$	350	490	\$	233	\$	723	490	\$	233	\$	723	
1" Meter	\$	400	547	\$	293	\$	840	547	\$	293	\$	840	
1-1/2" Meter	\$	615	610	\$	506	\$	1,116	610	\$	506	\$	1,116	
2" Turbine Meter	\$	850	927	\$	1,031	\$	1,958	927	\$	1,031	Š	1,958	
2" Compound Meter	\$	-	927	\$	1,884	\$	2,811	927	\$	1.884	\$	2,811	
3" Turbine Meter	\$	-	1171	\$	1,662	\$	2,833	1,171	\$	1,662	Ś	2,833	
3" Compound Meter	\$	-	1308	\$	2,546	\$	3,854	1,308	\$	2.546	\$	3,854	
4" Turbine Meter	\$	-	1661	\$	2,647	\$	4,308	1,661	\$	2,647	\$	4,308	
4" Compound Meter	<b>\$</b>	-	1866	\$	3,632	\$	5,498	1,866	\$	3,632	\$	5,498	
6" Turbine Meter	\$	-	2479	\$	5,026	\$	7,505	2,479	\$	5.026	\$	7,505	
6" Compound Meter	\$	-	2615	\$	6,939	\$	9,554	2,615	\$	6,939	Š	9,554	
Over 6"	\$	-	Cost		Cost		Cost	Cost	•	Cost	-	Cost	

### Typical Bill Analysis Residential 5/8 Inch Meter

Company Proposed	Gallons	Present Rates	F	Proposed Rates	 Oollar crease	Percent Increase
Average Usage	2,408	\$ 36.10	\$	48.53	\$ 12.44	34.46%
Median Usage	945	30.93		41.57	\$ 10.65	34.43%
Staff Recommended						
Average Usage	2,408	\$ 36.10	\$	46.86	\$ 10.77	29.82%
Median Usage	945	30.93		39.97	\$ 9.04	29.24%

### Present & Proposed Rates (Without Taxes) Residential 5/8 Inch Meter

			С	ompany			Staff	
	F	Present	P	roposed	%	Reco	ommended	%
Gallons		5/8 x 3/4"		5/8 x 3/4	T		5/8 x 3/4"	
Consumption		Rates		Rates	Increase		Rates	Increase
	\$	13.50	\$	18.50	37.04%	\$	17.00	25.93%
945	\$	16.71	\$	22.28	33.31%	\$	20.78	24.33%
1,000		16.90		22.50	33.14%		21.00	24.26%
2,000		20.30		26.50	30.54%		25.00	23.15%
2,408		21.69		28.13	29.72%		26.63	22.80%
3,000		23.70		30.50	28.69%		29.00	22.36%
4,000		27.10		35.75	31.92%		34.20	26.20%
5,000		30.50		41.00	34.43%		39.40	29.18%
5,109		30.93		41.57	34.43%		39.97	29.24%
6,000		34.40		46.25	34.45%		44.60	29.65%
6,435		36.10		48.53	34.46%		46.86	29.82%
7,000		38.30		51.50	34.46%		49.80	30.03%
8,000		42.20		56.75	34.48%		55.00	30.33%
9,000		46.10		62.00	34.49%		60.20	30.59%
10,000		50.00		67.25	34.50%		65.40	30.80%
11,000		53.90		73.79	36.90%		71.83	33.27%
12,000		57.80		80.33	38.98%		78.26	35.40%
13,000		61.70		86.87	40.79%		84.69	37.26%
14,000		65.60		93.41	42.39%		91.12	38.90%
15,000		69.50		99.95	43.81%		97.55	40.36%
16,000		73.40		106.49	45.08%		103.98	41.66%
17,000		77.30		113.03	46.22%		110.41	42.83%
18,000		81.20		119.57	47.25%		116.84	43.89%
19,000		85.10		126.11	48.19%		123.27	44.85%
20,000		89.00		132.65	49.04%		129.70	45.73%
25,000		110.25		165.35	49.98%		161.85	46.80%
30,000		131.50		198.05	50.61%		194.00	47.53%
35,000		152.75		230.75	51.06%		226.15	48.05%
40,000		174.00		263.45	51.41%		258.30	48.45%
45,000		195.25		296.15	51.68%		290.45	48.76%
50,000		216.50		328.85	51.89%		322.60	49.01%
75,000		322.75		492.35	52.55%		483.35	49.76%
100,000		429.00		655.85	52.88%		644.10	50.14%
100,000		+∠3.00		000.00	, JZ.0076		Q-1-1.1U	00.1470



ENGINEERING REPORT FOR Joshua Valley Utility Company, Inc.

Docket No. W-02023A-15-0315 (Rates)

By Jeff Francis

October 5, 2015

#### CONCLUSIONS

- 1. Arizona Corporation Commission ("ACC" or "Commission") Utilities Division Staff ("Staff") concludes that the Joshua Valley Utility Company, Inc. ("Joshua Valley" or "Company") water system has adequate well production and storage capacities to serve the present customer base and a reasonable level of growth.
- 2. Based upon data submitted by the water system, Arizona Department of Environmental Quality ("ADEQ") has determined the Joshua Valley water system is in compliance with ADEQ requirements and is currently delivering water that meets water quality standards required by 40 CFR 141/Arizona Administrative Code, Title 18, Chapter 4.
- 3. Lost water for the Company's water system was calculated to be 17.42 percent during the test year.
- 4. The Joshua Valley water system is not located in an Arizona Department of Water Resources ("ADWR") designated Active Management Area ("AMA").
- 5. ADWR has reported that the Company's water system is currently in compliance with ADWR requirements governing water providers and/or community water systems.
- 6. A check of the Utilities Division Compliance Section database showed that there are currently no delinquent Commission compliance items for the Company.
- 7. Joshua Valley has approved Curtailment and Backflow Tariffs on file with the Commission.

#### RECOMMENDATIONS

1. Lost water for Joshua Valley has been increasing for the past ten years and was calculated to be 17.42 percent in 2014 which exceeds acceptable limits. Staff recommends that the Company prepare a report containing a detailed analysis and plan to reduce the water loss to 10 percent or less. If the Company believes it is not cost effective to reduce the water loss to less than 10 percent, it should submit a detailed cost benefit analysis to support its opinion. In no case shall the Company allow water loss to be greater than 15 percent. The

water loss reduction report or the detailed analysis, whichever is submitted, shall be docketed as a compliance item within 90 days of the effective date of the order issued in this proceeding.

- 2. Staff recommends that the Company install a meter on the 3-inch standpipe that will function year-round, regardless of freezing weather. This meter shall be installed and operational within 60 days of the effective date of the order issued in this proceeding.
- 3. Staff recommends an annual water testing expense of \$3,490 be used for purposes of this application.
- 4. Staff recommends that the Company continue using the depreciation rates presented in Table C on a going forward basis.
- 5. Joshua Valley proposes to increase its existing service line and meter installation charges. Staff recommends that the charges listed under "Company Proposed/Staff Recommended" in Table D be adopted.
- 6. Staff recommends that Joshua Valley file with Docket Control, as a compliance item in this docket and within 90 days of the effective date of a decision in this proceeding, at least three best management practices ("BMPs") in the form of tariffs that substantially conform to the templates created by Staff. The templates created by Staff are available on the Commission's website at <a href="http://www.azcc.gov/Divisions/Utilities/Water/forms.asp">http://www.azcc.gov/Divisions/Utilities/Water/forms.asp</a>. Staff further recommends that a maximum of two BMPs may come from the "Public Awareness/Public Relations" or "Education and Training" categories. The Company may request cost recovery of the actual costs associated with the BMPs implemented in its next general rate application.

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### A. INTRODUCTION AND LOCATION OF COMPANY

On September 1, 2015, Joshua Valley Utilities Company ("Joshua Valley" or "Company") filed a rate application with the Arizona Corporation Commission ("ACC" or "Commission") in docket No. W-02023A-15-0315. The Commission Utilities Division Staff ("Staff") engineering review and analysis of the application is presented in this report.

The Company provides water service to approximately 947 customers in the unincorporated community of Meadview, located approximately 70 miles north of Kingman, in Mohave County.

The plant facilities were visited on March 5, 2015, by Jeff Francis, Staff Utilities Engineer, accompanied by the Company's Certified Operator and representative Ron Raymond.<sup>1</sup>

Figure 1 shows the location of the Company within Mohave County and Figure 2 delineates the Company's certificated area which covers approximately 4.5 square-miles.

<sup>&</sup>lt;sup>1</sup> Mr. Raymond is a Certified Grade 2 Water Distribution System Operator, ADEQ Operator Identification No. OP006815.

## M OHAVE COUNTY

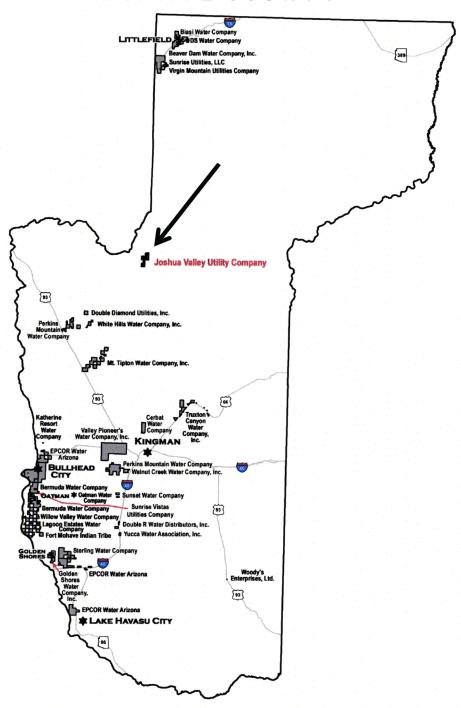


Figure 1. County Map

# M OHAVE COUNTY

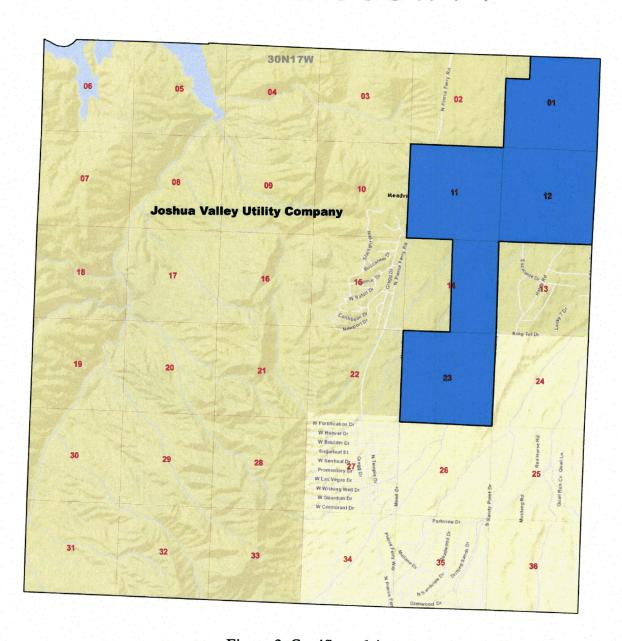


Figure 2. Certificated Area

#### **B. DESCRIPTION OF THE WATER SYSTEM**

The Joshua Valley water system consists of five active wells, four storage tanks, a pressure tank and a distribution system with approximately 947 metered connections. There are also two stand pipes, one at the Unit 2 location and another at the Double Tanks location. The standpipe at the Unit 2 location is a coin operated, metered stand pipe and is used by those that live in the area but are not within the vicinity of the distribution mains and so must haul water. The standpipe at the Double Tanks location has a lock and a 3-inch meter, however the meter is not functioning (the meter is exposed to the elements, and per the Company it froze during winter weather shortly after it was installed). The primary user of this standpipe is Mohave County (for road maintenance and construction) and since the meter is not functioning, water is sold via an honor system.

A water system schematic is shown in Figure 3 and a plant facilities summary is shown in Table A below.

Table A. Joshua Valley Plant Facilities Summary<sup>2</sup>

#### Well Data

Well No. (Location Site)	ADWR Well ID	Pump Size (HP)	Pump Yield (GPM)	Casing Depth (feet)	Casing Diameter (inches)	Meter Size (inches)	Year Drilled
#4 (Unit 2)	55-610733	15	43	600	10	2	1966
#3 (Middle Point)	55-610729	20	28	800	8	2	1972
#1 (Double Tanks)	55-610725	20	55	645	6	2	1973
#5 (Middle Point 2)	55-610726	20	72	600	6	2	1973
#6 (Echo Dr.)	55-914283	10	50	610	6	2	2012

Water Tanks

	Sto	rage	Pressure		
Location Site	Capacity (gallons)	Quantity	Capacity (Gallons)	Quantity	
Double Tanks	100,000	2	5,000	1	
Middle Point	125,000	1			
Yates	185,000	1			

<sup>&</sup>lt;sup>2</sup> The information listed was based on one, or a combination of, the following sources: 1) Company's Application, 2) Commission Annual Reports, 3) Arizona Department of Water Resources Records, 4) Information contained in the Company's Response to a Staff Data Request and, 5) Information collected during Staff's site visit.

Table A. Joshua Valley Plant Facilities Summary (cont.)

#### **Distribution Mains**

Size (inches)	Material	Length (feet)			
2	transite	2,400			
3	PVC	2,865			
4	PVC	107,670			
4	transite	6,600			
6	PVC	179,440			
6	transite	8,400			
8	PVC	9,705			

#### Meters

11200010				
Size (inches)	Quantity			
5/8 x 3/4	917			
3/4	4			
1	18			
1-1/2	1			
2	1			

## **Other Items**

Location	Item Description
Double Tanks	3-inch standpipe (non-functioning meter)
Unit 2	1-inch standpipe (metered, coin operated)
Double Tanks	Two metal buildings (storage and maintenance)

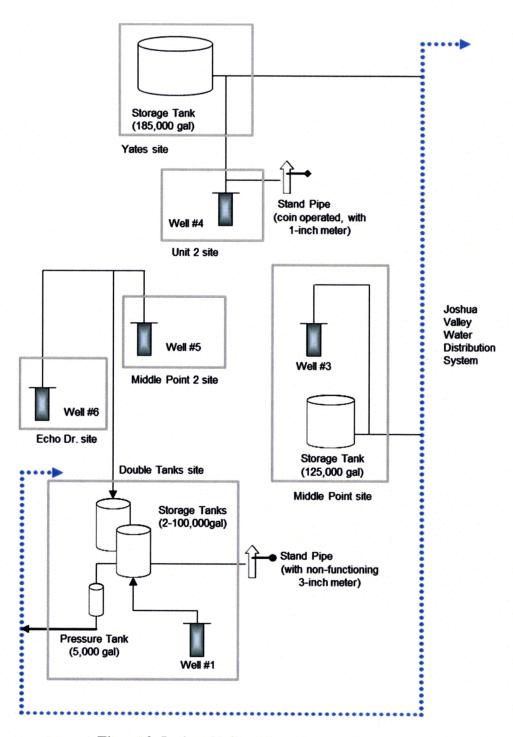


Figure 3. Joshua Valley Water System Schematic

#### C. WATER USE

Water Sold

Figure 4 presents the water consumption data provided by the Company for the test year ending December 31, 2014. Customer consumption included a high monthly water use of 128 gallons per day ("GPD") per connection in June, and the low water use was 54 GPD per connection in December. The average use for the twelve-month period was 89 GPD per connection. The Company reported 30,650,100³ gallons of water sold during the test year.

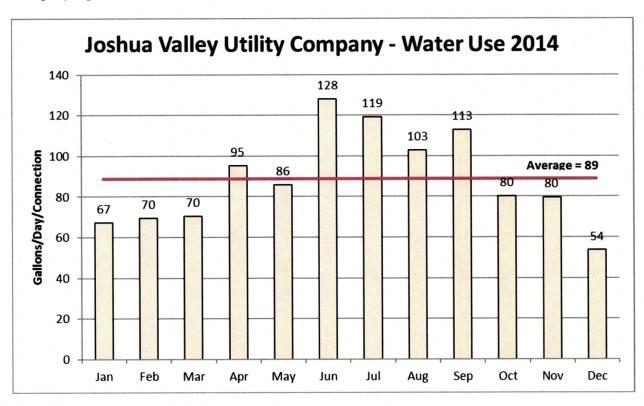


Figure 4. Joshua Valley Water Use

Non-Account Water

Non-account water should be 10 percent or less, and never more than 15 percent. It is important to be able to reconcile the difference between water sold and the water produced by the source. A water balance will allow a company to identify water and revenue losses due to leakage, theft and flushing.

The Company reported 37,117,700 gallons of water pumped and 30,650,100 gallons of water sold during the test year ending December 31, 2013, resulting in a water loss of 17.42 percent, which

<sup>&</sup>lt;sup>3</sup> Total water sold during the test year based on the Water Use Data Sheet on page 18 of the Rate Application.

exceeds acceptable limits. In order to understand if this was an anomaly, staff examined the historic water loss for Joshua Valley over the ten year period of 2005 to 2014. The results are shown in Figure 5.<sup>4</sup>

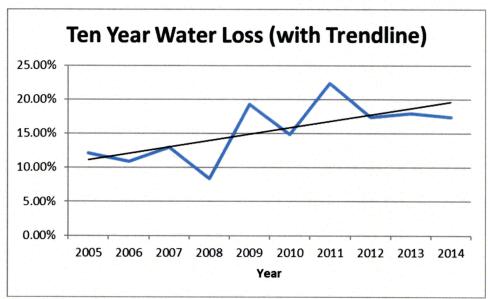


Figure 5. Joshua Valley Ten Year Water Loss

These results were discussed with the Company during the site visit and several potential causes were identified. First, there are many older meters in the Joshua Valley water system that are registering in the millions of gallons and which are suspected to be inaccurate, however the Company has been replacing meters only on an as-needed, reactive basis. Second, some of the underground infrastructure was put in place in the 1960s before the local streets were paved. The amount and type of road traffic has changed dramatically since then and is suspected to be causing leaks in this old infrastructure. In addition, the Company suspects there are leaks in the black poly pipe which was used for customer connections in this 1960s vintage infrastructure. Finally, the meter on the 3-inch standpipe has been non-functional for an extended period of time. There is concern by the Company of inaccuracy in the honor system being used to account for water usage on that standpipe.

Based on the above discussion along with the ongoing trend of increasing water loss, Staff recommends that the Company prepare a report containing a detailed analysis and plan to reduce the water loss to 10 percent or less. If the Company believes it is not cost effective to reduce the water loss to less than 10 percent, it should submit a detailed cost benefit analysis to support its opinion. In no case shall the Company allow water loss to be greater than 15 percent. The water loss reduction report or the detailed analysis, whichever is submitted, shall be docketed as a compliance item within 90 days of the effective date of the order issued in this proceeding.

<sup>&</sup>lt;sup>4</sup> Based on water use data obtained from the Company's Annual Reports on file with the ACC.

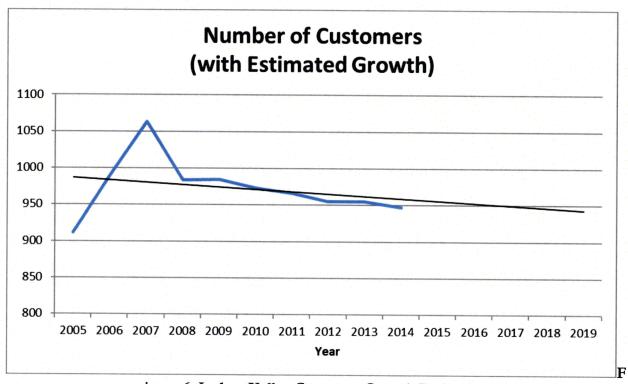
Staff further recommends that the Company install a meter on the 3-inch standpipe that will function year-round, regardless of freezing weather. This meter shall be installed and operational within 60 days of the effective date of the order issued in this proceeding.

System Analysis

Based on the water use data provided by the Company for the Test Year, Staff concludes that the system's total well production capacity of 248 GPM and total storage capacity of 510,000 gallons is adequate to serve the present customer base and reasonable growth.

#### D. GROWTH

Based on customer data obtained from the Company's Annual Reports, it is projected that Joshua Valley will not have growth over the next 5 years. Figure 6 depicts the actual number of customers from 2004 to 2013 and projects an estimated decline for the next five years using linear regression analysis.



igure 6. Joshua Valley Customer Growth Projection

#### E. ADEQ COMPLIANCE

Compliance

The ADEQ regulates the Joshua Valley water system under ADEQ Public Water System ("PWS") No. 08-017. According to the Compliance Status Report, dated July 22, 2015, based upon data submitted by the water system, ADEQ has determined that this system is in compliance with ADEQ requirements and is currently delivering water that meets water quality standards required by 40 CFR 141/Arizona Administrative Code, Title 18, Chapter 4.

Water Testing Expense

Participation in the ADEQ Monitoring Assistance Program ("MAP") is mandatory for water systems which serve less than 10,000 persons (approximately 3,300 service connections).

The Company supplied invoices totaling \$390 for water testing expenses during the test year.<sup>5</sup> Upon review it was determined that invoices were not submitted for all required tests, and that approximately \$100 of the invoices submitted were associated with tests that are not required on an ongoing basis. In addition, the per-test cost for Total Coliform increased from \$20 to \$25 during the test year.

There were no invoices submitted for MAP, so Staff contacted ADEQ to obtain that expense. In addition to Total Coliform and MAP, the Joshua Valley water system is required to perform tests for Lead and Copper every third year. There were no invoices submitted for these tests, so Staff concluded that they were not performed during the test year. In order to determine the cost for these tests Staff contacted the laboratory used by the Company, Mohave Environmental Lab ("Mohave"). The MAP testing costs obtained from ADEQ, and the Lead and Copper testing costs provided by Mohave are included in Staff's analysis of annual testing expenses.

The monitoring and testing expenses that were reviewed, evaluated, and recalculated by Staff are represented in Table B. Staff recommends its annual water testing expense estimate of \$3,490 be used for this proceeding.

1

<sup>&</sup>lt;sup>5</sup> See Exhibit 6 – Water Testing Support in the rate application.

Table B. Water Testing Cost

Water Test	Cost per Test	Quantity of Tests per 3 years	3 Year Testing Costs	Annual Testing Cost
Total Coliform	\$25	72	\$1,800	\$600
MAP - IOCs, SOCs, VOCs, Nitrate, Nitrite, Asbestos, Radiochemicals	#2.720	2	<b>\$0.400</b>	<b>#2.73</b> 0
Radiochemicals	\$2,730	3	\$8,190	\$2,730
Lead & Copper	\$48	10	\$480	\$160
Total Cost			\$10,470	\$3,490

### F. ARIZONA DEPARTMENT OF WATER RESOURCES ("ADWR") COMPLIANCE

The Joshua Valley service area is not located within any ADWR Active Management Area ("AMA"). ADWR's Water Provider Compliance Report, dated October 5, 2015, indicates that the Company is currently compliant with departmental requirements governing water providers and/or community water systems.

#### G. ACC COMPLIANCE

A check of the Utilities Division Compliance Section database showed that there are no delinquent Commission compliance items for Joshua Valley.<sup>6</sup>

#### H. DEPRECIATION RATES

The following table lists the annual depreciation rates by NARUC plant category currently recommended by Staff. These rates represent typical and customary values within a range of anticipated equipment life. Staff recommends that the Company use the depreciation rates presented in Table C on a going forward basis.

<sup>&</sup>lt;sup>6</sup> Per Compliance Section email dated September 16 2015.

Table C. Depreciation Rate Table for Water Companies

NARUC Depreciable Plant		Average Service Life	Annual Accrual
Acct. No.	Acct. No.		Rate (%)
304	Structures & Improvements	30	3.33
305	Collecting & Impounding Reservoirs	40	2.50
306	Lake, River, Canal Intakes	40	2.50
307	Wells & Springs	30	3.33
308	Infiltration Galleries	15	6.67
309	Raw Water Supply Mains	50	2.00
310	Power Generation Equipment	20	5.00
311	Pumping Equipment	8	12.5
320	Water Treatment Equipment		
320.1	Water Treatment Plants	30	3.33
320.2	Solution Chemical Feeders	5	20.00
320.3	Point-of-Use Treatment Devices	10	10.00
330	Distribution Reservoirs & Standpipes		
330.1	Storage Tanks	45	2.22
330.2	Pressure Tanks	20	5.00
331	Transmission & Distribution Mains	50	2.00
333	Services	30	3.33
334	Meters	12	8.33
335	Hydrants	50	2.00
336	Backflow Prevention Devices	15	6.67
339	Other Plant & Misc Equipment	15	6.67
340	Office Furniture & Equipment	15	6.67
340.1	Computers & Software	5	20.00
341	Transportation Equipment	5	20.00
342	Stores Equipment	25	4.00
343	Tools, Shop & Garage Equipment	20	5.00
344	Laboratory Equipment	10	10.00
345	Power Operated Equipment	20	5.00
346	Communication Equipment	10	10.00
347	Miscellaneous Equipment	10	10.00
348	Other Tangible Plant <sup>7</sup>		

<sup>&</sup>lt;sup>7</sup> Acct. 348, Other Tangible Plant may vary from 5 percent to 50 percent. The depreciation rate would be set in accordance with the specific capital items in this account.

#### I. OTHER ISSUES

Service Line and Meter Installation Charges

Joshua Valley proposes to increase its existing service line and meter installation charges.<sup>8</sup> The proposed charges are refundable advances and are within the Staff's typical range of charges for service line and meter installations. Since the Company may at times install meters on existing service lines, it would be appropriate for some customers to only be charged for the meter installation. Staff recommends that the charges listed under "Company Proposed/Staff Recommended" in Table D be adopted.

Table D. Service Line and Meter Installation Charges

Table D. betwee Line and Metel Instanation Charges					
		Company Proposed/Staff Recommended			
Meter Size	Company Current Tariff	Service Line Charge	Meter Charge	Total Charge	
5/8 x 3/4-inch	\$320.00	\$490.00	\$132.00	\$622.00	
3/4-inch	\$350.00	\$490.00	\$233.00	\$723.00	
1-inch	\$400.00	\$547.00	\$293.00	\$840.00	
1-1/2-inch	\$615.00	\$610.00	\$506.00	\$1,116.00	
2-inch Turbine	\$850.00	\$927.00	\$1,031.00	\$1,958.00	
2-inch Compound		\$927.00	\$1,884.00	\$2,811.00	
3-inch Turbine	-	\$1,171.00	\$1,662.00	\$2,833.00	
3-inch Compound	-	\$1,308.00	\$2,546.00	\$3,854.00	
4-inch Turbine	_	\$1,661.00	\$2,647.00	\$4,308.00	
4-inch Compound	_	\$1,866.00	\$3,632.00	\$5,498.00	
6-inch Turbine	-	\$2,479.00	\$5,026.00	\$7,505.00	
6-inch Compound	-	\$2,615.00	\$6,939.00	\$9,554.00	
Over 6-inch	_	Cost	Cost	Cost	

Curtailment Tariff

Joshua Valley has an approved Curtailment Tariff on file with the Commission.9

Backflow Prevention Tariff

Joshua Valley has an approved Backflow Prevention Tariff on file with the Commission.<sup>10</sup>

<sup>&</sup>lt;sup>8</sup> The Company's current charges were approved in Decision No. 64000.

<sup>&</sup>lt;sup>9</sup> See Docket W-02023A-15-0039.

<sup>&</sup>lt;sup>10</sup> See Docket W-02023A-10-0192.

Best Management Practices ("BMP") Tariff

Staff recommends that Joshua Valley file with Docket Control, as a compliance item in this docket and within 90 days of the effective date of a decision in this proceeding, at least three BMPs in the form of tariffs that substantially conform to the templates created by Staff. The templates created by Staff are available on the Commission's website at <a href="http://www.azcc.gov/Divisions/Utilities/Water/forms.asp">http://www.azcc.gov/Divisions/Utilities/Water/forms.asp</a>. Staff further recommends that a maximum of two BMPs may come from the "Public Awareness/Public Relations" or "Education and Training" categories. The Company may request cost recovery of the actual costs associated with the BMPs implemented in its next general rate application.